



June 26, 2007

Charles L.A. Terreni  
Chief Clerk and Administrator  
South Carolina Public Service Commission  
Post Office Drawer 11649  
Columbia, South Carolina 29211

Re: Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc.  
Power Plant Performance Report (May 2007)  
Docket No. 2006-224-E

Dear Mr. Terreni:

Enclosed are an original and one copy of the Power Plant Performance Report for Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. for the month of May 2007.

Sincerely,

s/ Len S. Anthony

Len S. Anthony  
Deputy General Counsel – Regulatory Affairs

LSA/dhs  
Enclosures  
45612

c: John Flitter (ORS)

May 2007

The following units had no off-line outages during the month of May:

Brunswick Unit 1  
Brunswick Unit 2  
Harris Unit 1  
Mayo Unit 1  
Roxboro Unit 3  
Roxboro Unit 4

Robinson Unit 2

Full Scheduled Outage

- A. Duration: The unit was taken out of service at 0:00 on April 7, and returned to service at 21:20 on May 13, a duration of 885 hours and 20 minutes. 309 hours and 20 minutes of the outage occurred in May.
- B. Cause: Scheduled Refueling Outage
- C. Explanation: The unit was taken out of service for a scheduled refueling outage. In addition to refueling, required maintenance, inspections, and testing were carried out during this outage. Further, modifications were made to the Emergency Core Cooling System (ECCS) sump.
- D. Corrective Action: Planned outage activities were completed, and the unit was returned to service.

Full Forced Outage

- A. Duration: The unit was taken out of service at 11:16 on May 15, and returned to service at 12:09 on May 17, a duration of 48 hours and 53 minutes.
- B. Cause: Generator Lock-Out Due to Generator Current Differential
- C. Explanation: The unit experienced an automatic shutdown due to a generator lock-out caused by a generator current differential. A wire from a current transformer apparently worked loose and shorted.
- D. Corrective Action: Repairs were made to correct damaged wiring and circuitry in main transformer control cabinet. Also, the generator differential relay was upgraded to include surge protection. Upon completion of repairs and testing, the unit was returned to service.

Roxboro Unit 2

Full Forced Outage

- A. Duration: The unit was taken out of service at 18:00 on May 6, and returned to service at 10:38 on May 10.
- B. Cause: Waterwall Tube Leak
- C. Explanation: The unit was taken out of service to investigate and repair a tube leak in the waterwall section of the boiler.
- D. Corrective Action: Weld repairs were made, and the unit was returned to service.

	Month of May 2007		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	938 MW		938 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	706,345 MWH		7,914,615 MWH		2
Capacity Factor	101.21 %		96.32 %		
Equivalent Availability	98.76 %		93.49 %		
Output Factor	101.21 %		101.34 %		
Heat Rate	10,348 BTU/KWH		10,325 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	0	0.00	3
Partial Scheduled	8,619	1.24	41,615	0.51	4
Full Forced	0	0.00	407,202	4.96	5
Partial Forced	0	0.00	61,935	0.75	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	697,872		8,216,880		8

\* See 'Notes for Nuclear Units' filed with the January 2007 report.

\*\* Gross of Power Agency

	Month of May 2007		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	937 MW		937 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	703,179 MWH		6,539,663 MWH		2
Capacity Factor	100.87 %		79.67 %		
Equivalent Availability	99.44 %		78.92 %		
Output Factor	100.87 %		98.18 %		
Heat Rate	10,511 BTU/KWH		10,576 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	1,040,570	12.68	3
Partial Scheduled	3,922	0.56	104,803	1.28	4
Full Forced	0	0.00	506,464	6.17	5
Partial Forced	0	0.00	61,435	0.75	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	697,128		8,208,120		8

\* See 'Notes for Nuclear Units' filed with the January 2007 report.

\*\* Gross of Power Agency

	Month of May 2007		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	900 MW		900 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	678,022 MWH		7,964,842 MWH		2
Capacity Factor	101.26 %		101.03 %		
Equivalent Availability	100.00 %		99.21 %		
Output Factor	101.26 %		101.77 %		
Heat Rate	10,858 BTU/KWH		10,803 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	0	0.00	3
Partial Scheduled	0	0.00	1,063	0.01	4
Full Forced	0	0.00	57,465	0.73	5
Partial Forced	0	0.00	11,732	0.15	6
Economic Dispatch	0	0.00	0	0.00	7
Possible MWH	669,600		7,884,000		8

\* See 'Notes for Nuclear Units' filed with the January 2007 report.

\*\* Gross of Power Agency

	Month of May 2007		Twelve Month Summary		See Notes*
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MDC	710 MW		710 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	257,258 MWH		5,703,485 MWH		2
Capacity Factor	48.70 %		91.70 %		
Equivalent Availability	47.68 %		88.11 %		
Output Factor	93.92 %		103.37 %		
Heat Rate	11,792 BTU/KWH		10,812 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
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Full Scheduled	219,626	41.58	628,586	10.11	3
Partial Scheduled	15,980	3.03	16,784	0.27	4
Full Forced	34,707	6.57	73,508	1.18	5
Partial Forced	6,083	1.15	14,751	0.24	6
Economic Dispatch	0	0.00	9,775	0.16	7
Possible MWH	528,240		6,219,600		8

\* See 'Notes for Nuclear Units' filed with the January 2007 report.



	Month of May 2007		Twelve Month Summary		See Notes*
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MDC	741 MW		743 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	438,567 MWH		4,411,351 MWH		2
Capacity Factor	79.55 %		67.96 %		
Equivalent Availability	100.00 %		90.04 %		
Output Factor	79.55 %		72.84 %		
Heat Rate	10,173 BTU/KWH		10,578 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	363,815	5.59	3
Partial Scheduled	0	0.00	81,290	1.25	4
Full Forced	0	0.00	71,490	1.10	5
Partial Forced	0	0.00	130,965	2.01	6
Economic Dispatch	112,737	20.45	1,452,798	22.31	7
Possible MWH	551,304		6,511,600		8

\* See 'Notes for Fossil Units' filed with the January 2007 report.

\*\* Gross of Power Agency

	Month of May 2007		Twelve Month Summary		See Notes*
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MDC	639 MW		657 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	354,446 MWH		4,154,904 MWH		2
Capacity Factor	74.55 %		72.18 %		
Equivalent Availability	81.97 %		83.42 %		
Output Factor	84.64 %		82.60 %		
Heat Rate	9,501 BTU/KWH		9,383 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	<hr/>	<hr/>	<hr/>	<hr/>	
Full Scheduled	56,636	11.91	531,474	9.23	3
Partial Scheduled	23,704	4.99	299,745	5.21	4
Full Forced	0	0.00	96,119	1.67	5
Partial Forced	5,362	1.13	13,767	0.24	6
Economic Dispatch	35,267	7.42	665,077	11.55	7
Possible MWH	475,416		5,756,050		8

\* See 'Notes for Fossil Units' filed with the January 2007 report.

	Month of May 2007		Twelve Month Summary		See Notes*
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MDC	705 MW		706 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	380,751 MWH		3,739,167 MWH		2
Capacity Factor	72.59 %		60.45 %		
Equivalent Availability	96.47 %		77.97 %		
Output Factor	72.59 %		73.94 %		
Heat Rate	11,497 BTU/KWH		10,642 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	1,031,967	16.68	3
Partial Scheduled	11,155	2.13	62,872	1.02	4
Full Forced	0	0.00	98,218	1.59	5
Partial Forced	7,340	1.40	171,003	2.76	6
Economic Dispatch	125,275	23.88	1,079,994	17.46	7
Possible MWH	524,520		6,186,020		8

\* See 'Notes for Fossil Units' filed with the January 2007 report.

	Month of May 2007		Twelve Month Summary		See Notes*
	-----		-----		-----
MDC	698 MW		699 MW		1
Period Hours	744 HOURS		8,760 HOURS		
Net Generation	370,384 MWH		4,193,281 MWH		2
Capacity Factor	71.32 %		68.47 %		
Equivalent Availability	99.75 %		96.70 %		
Output Factor	71.32 %		69.07 %		
Heat Rate	10,579 BTU/KWH		10,566 BTU/KWH		
	MWH	% of Possible	MWH	% of Possible	
	-----	-----	-----	-----	
Full Scheduled	0	0.00	39,728	0.65	3
Partial Scheduled	1,103	0.21	135,002	2.20	4
Full Forced	0	0.00	5,600	0.09	5
Partial Forced	200	0.04	21,671	0.35	6
Economic Dispatch	147,625	28.43	1,729,472	28.24	7
Possible MWH	519,312		6,124,700		8

\* See 'Notes for Fossil Units' filed with the January 2007 report.

\*\* Gross of Power Agency

Plant	Unit	Current MW Rating	January 2006 - December 2006	May 2007	January 2007 - May 2007
Asheville	1	197	72.44	42.48	46.33
Asheville	2	186	60.37	74.36	76.20
Cape Fear	5	144	72.32	70.31	77.35
Cape Fear	6	173	65.99	58.44	70.50
Lee	1	77	47.56	42.01	51.60
Lee	2	77	43.52	38.37	58.73
Lee	3	252	60.06	58.36	68.92
Mayo	1	741	67.04	79.55	66.18
Robinson	1	180	78.19	68.72	76.33
Roxboro	1	383	77.79	74.14	77.61
Roxboro	2	639	81.26	74.55	63.79
Roxboro	3	705	59.60	72.59	74.58
Roxboro	4	698	65.20	71.32	71.15
Sutton	1	97	44.30	56.09	57.72
Sutton	2	106	46.43	62.85	64.82
Sutton	3	403	54.54	0.00	46.92
Weatherspoon	1	49	36.15	53.53	58.40
Weatherspoon	2	49	37.40	48.90	54.72
Weatherspoon	3	79	50.52	37.63	67.24
Fossil System Total		5,235	65.25	63.35	66.90
Brunswick	1	938	87.51	101.21	98.51
Brunswick	2	937	89.68	100.87	68.60
Harris	1	900	89.16	101.26	102.49
Robinson Nuclear	2	710	103.59	48.70	76.47
Nuclear System Total		3,485	91.80	90.43	87.01
Total System		8,720	75.80	74.17	74.94

Amended SC Fuel Rule  
Related to Nuclear Operations

There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation system if the utility achieved a net capacity factor of  $\geq 92.5\%$  during the 12 month period under review. For the test period April 1, 2007 through May 31, 2007, actual period to date performance is summarized below:

Period to Date: April 1, 2007 to May 31, 2007

Nuclear System Capacity Factor Calculation (Based on net generation)

A.. Nuclear system actual generation for SCPSC test period                      A = 3,902,485 MWH

B. Total number of hours during SCPSC test period                                      B =            1,464 hours

C. Nuclear system MDC during SCPSC test period (see page 2)                      C =            3,485 MW

D. Reasonable nuclear system reductions (see page 2)                                  D =    1,263,517 MWH

A. SC Fuel Case nuclear system capacity factor:  $[(A + D) / (B + C)] * 100 = 101.3\%$

NOTE:

If Line Item E  $> 92.5\%$ , presumption of utility's minimum cost of operation.

If Line Item E  $< 92.5\%$ , utility has burden of proof of reasonable operations.

Amended SC Fuel Rule  
Nuclear System Capacity Factor Calculation  
Reasonable Nuclear System Reductions  
Period to Date: April 1, 2007 to May 31, 2007

Nuclear Unit Name and Designation	BNP Unit # 1	BNP Unit # 2	HNP Unit # 1	RNP Unit # 2	Nuclear System
Unit MDC	938 MW	937 MW	900 MW	710 MW	3,485 MW
Reasonable refueling outage time (MWH)	0	392,521	0	628,587	
Reasonable maintenance, repair, and equipment replacement outage time (MWH)	127,330	4,543	0	34,707	
Reasonable coast down power reductions (MWH)	0	0	0	6,195	
Reasonable power ascension power reductions (MWH)	20,463	27,100	0	22,063	
Prudent NRC required testing outages (MWH)	8	0	0	0	
SCPSC identified outages not directly under utility control (MWH)	0	0	0	0	
Acts of Nature reductions (MWH)	0	0	0	0	
Reasonable nuclear reduction due to low system load (MWH)	0	0	0	0	
Unit total excluded MWH	147,801	424,164	0	691,552	
Total reasonable outage time exclusions [carry to Page 1, Line D]					1,263,517